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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
Office Action Summary	10/788,768	LILLEY ET AL.	
	Examiner	Art Unit	
	LI B. ZHEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 December 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19 and 22-24</u> is/are rejected.

7)☒ Claim(s) <u>20 and 21</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 24 are pending in the application.

Allowable Subject Matter

2.   Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

3.   Applicant's arguments with respect to the prior art have been considered but are moot in view of the new ground(s) of rejection.

4.   The 35 USC § 101 rejection of claims 16 – 21 is withdrawn. Upon further consideration, the examiner interprets the system recited in claim 16 as including statutory subject matter. Specifically, the system in claim 16 comprises at least one electronic device and a plurality of service providers. Examples of the electronic devices include, for example, a personal digital assistant (PDA), a personal computer (PC), a pager, etc. (paragraph 0037 of the specification). The service providers are interpreted as server machines in a network connected to the electronic device (paragraph 0037 of the specification). Therefore, the system recited in claim 16 includes statutory subject matter.

5.   In response to the 35 USC § 101 rejection, applicant submits that the "service

broker" is not claimed as a computer listing per se and is therefore a statutory invention

(p. 9). In addition, applicant submits that "server broker" as claimed is not limited to any

one particular server broker, but may include, for example, a server such as server

broker server 127 (p. 10).

        Examiner respectfully disagrees and submits the claims are rejected under 35

USC § 101 based on the interpretation that the "server broker" is a computer program.

The system in claim 1 comprises a service broker and does not include any physical

structure. In addition, applicant's specification specifically discloses in one embodiment

that the server broker is a software component (p. 3, paragraph 0011). The service

broker is a computer program that is not being claimed as part of a statutory

manufacture (i.e. computer memory) or machine. According to MPEP 2106.01 (I):

> Since a computer program is merely a set of instructions capable of being
> executed by a computer, the computer program itself is not a process and
> USPTO personnel should treat a claim for a computer program, without the
> computer-readable medium needed to realize the computer program's
> functionality, as nonstatutory functional descriptive material. When a computer
> program is claimed in a process where the computer is executing the computer
> program's instructions, USPTO personnel should treat the claim as a process
> claim. ** When a computer program is recited in conjunction with a physical
> structure, such as a computer memory, USPTO personnel should treat the claim
> as a product claim. **

Therefore, the claimed service broker program does not include the storage medium

needed to realize the service broker's functionality and is considered as nonstatutory

functional descriptive material.

Although applicant submits that the service broker may be implemented as a

server, it is noted that this feature is not positively recited in claim 1. However, this

feature is recited in dependent claim 11; therefore, claim 11 is not rejected under 35

USC § 101.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

7.   Claims 1 – 10 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claim 1 recites a system comprising of a service broker. The service broker is

interpreted as software only and is functional descriptive material. However, function

descriptive material is nonstatutory when claimed as descriptive material per se. When

functional descriptive material is recorded on some computer-readable medium, it

becomes structurally and functionally interrelated to the medium and will be statutory in

most cases since use of technology permits the function of the descriptive material to be

realized. Since claim 1 does not recite the service broker as being recorded on a

computer-readable medium, the system is interpreted as comprising functional

descriptive material per se and non statutory. See MPEP § 2106.01.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.   **Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by**

U.S. Patent No. 5,812,768 to Page et al. [hereinafter Page].

10.   As to claim 1, Page teaches a system that facilitates interactions between one of

a plurality of software components [col. 5, lines 14 – 24] in an electronic device [clients

10a-10d, Fig. 2; col. 4, lines 62 – 66] and an associated one of a plurality of servers

[servers 12a-12d, Fig. 2; col. 4, lines 62 – 66], via a network [network 22, Fig. 2; col. 4,

lines 62 – 66], the system comprising:

        a service broker [service broker 14, Fig. 2; col. 4, lines 62 – 66] capable of

receiving at least one request for service associated with one of the plurality of software

components [col. 37, lines 20 – 32 and col. 6, lines 5 – 10], wherein the request for

service does not identify a location from which to obtain the service [col. 40, lines 19 –

43];

        the service broker capable of determining the one of the plurality of servers

associated with the one of the plurality of software components [col. 3, lines 44 – 58],

based upon a prior registration associating the one of the plurality of servers with the

one of the plurality of software components making the at least one request for service

[col. 37, lines 35 – col. 38, line 25]; and

the service broker capable of forwarding the at least one request for service to

the determined one of the plurality of servers [col. 3, lines 43 – 58; col. 46, lines 1 – 19;

col. 51, line 64 – col. 52, line 10; col. 51, lines 6 – 9].

11.   As to claim 2, Page teaches the service broker capable of selectively

communicating a response from the determined one of the plurality of servers to the

one of the plurality of software components in the electronic device [col. 51, lines 11 –

29].

12.   As to claim 3, Page teaches the service broker comprises a software component

in the electronic device [col. 15, lines 47 – col. 16, line 13].

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

14.   **Claims 1 – 19 and 22 – 24 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over U.S. Patent No. 6,202,207 to Donohue [previously cited] in view

of U.S. Patent Application Publication No. 20020100036 to Moshir et al.

[hereinafter Moshir].

15.   As to claim 1, Donohue teaches a system that facilitates interactions between

one of a plurality of software components [programs installed; col. 9, line 45 – col. 10,

line 2] in an electronic device [local system 10; col. 10, lines 2 – 16] and an associated

one of a plurality of servers [col. 10, lines 2 – 15], via a network [network 100; col. 10,

lines 2 – 15], the system comprising:

         a service broker [col. 15, lines 29 – 42] capable of receiving at least one request

for service associated with one of the plurality of software components [col. 10, lines 17

– 22], wherein the request for service does not identify a location from which to obtain

the service [col. 10, lines 16 – 39]; and

         the service broker capable of determining the one of the plurality of servers

associated with the one of the plurality of software components [CORBA (Common

Object Request Broker Architecture) ORB (Object Request Broker) is used for location

of and communication between two updater components; col. 16, lines 46 – 60], based

upon a prior registration [component updater registration database 40; col. 16, lines 46

– 60] associating the one of the plurality of servers with the one of the plurality of

software components making the at least one request for service [col. 16, lines 6 – 40;

col. 9, line 45 – col. 10, line 3]. Donohue does not specifically disclose the service

broker capable of forwarding the at least one request for service to the determined one

of the plurality of servers.

         However, Moshir teaches service broker capable of forwarding the at least one

request for service to the determined one of the plurality of servers [paragraphs 0060

and 0061].

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify the invention of Donohue to incorporate the features of

Moshir. One of ordinary skill in the art would have been motivated to make the

combination because this provides a system for assuring that software updates are

needed, and that the computers have the necessary software and hardware

components, then updating the software across a network with little or no need for

human oversight [paragraph 0333 of Moshir].

16.   As to claim 16, Donohue as modified teaches a wireless communication system

supporting at least one electronic device [paragraph 0046 of Moshir], the system

comprising:

        a service broker [col. 15, lines 29 – 42 of Donohue] communicatively coupled to

the at least one electronic device [col. 16, lines 46 – 60 of Donohue];

        a plurality of service providers, each of the plurality of service providers

communicatively coupled to the service broker [col. 10, lines 2 – 15 of Donohue];

        a client-side component in the at least one electronic device that requests a

software update [col. 6, lines 11 – 35 of Donohue] from one of the plurality of service

providers [col. 9, line 45 – col. 10, line 2 of Donohue], wherein the request for service

does not identify a location from which to obtain the service [col. 10, lines 16 – 39]; and

        wherein the service broker determines the appropriate one of the plurality of

service providers to respond to the software update request [col. 16, lines 46 – 60 of

Donohue], based upon an association of the one of the plurality of service providers

with the client-side component that made the request [paragraphs 0060 and 0061 of

Moshir and col. 16, lines 6 – 60; col. 9, line 45 – col. 10, line 3 of Donohue].

17.   As to claim 22, Donohue as modified teaches a method for updating at least one

of a software component [col. 6, lines 11 – 35 of Donohue] and software component

configuration information in an electronic device [col. 10, lines 2 – 16 of Donohue]

communicatively coupled to a service broker [col. 15, lines 29 – 42 and col. 16, lines 46

– 60 of Donohue], the method comprising:

        under the control of the electronic device, registering at least one call-back

function available in the software component [col. 7, line 54 – col. 8, line 10 of

Donohue], wherein each of the at least one call-back function is associated with a

server [paragraph 0083 of Moshir];

        communicating, to the service broker, a request for updating of at least one of the

software component and software component configuration [col. 16, lines 6 – 40; col. 9,

line 45 – col. 10, line 3 of Donohue];

        receiving results from a remote service provider [paragraphs 0086 and 0087 of

Moshir]; and

        invoking the at least one call-back function using the received results [paragraph

0099 of Moshir]; and

        under the control of the service broker, receiving an update request [col. 10, lines

17 – 22 of Donohue];

determining a service provider based upon the update request [col. 16, lines 46 –

60 of Donohue];

invoking update functionality on the determined service provider [col. 7, line 54 –

col. 8, line 10 of Donohue]; and

transmitting results of the invoked update functionality to the mobile device

[paragraphs 0106 and 0107 of Moshir].

18.   As to claim 2, Donohue as modified teaches the service broker capable of

selectively communicating a response from the determined one of the plurality of

servers to the one of the plurality of software components in the electronic device

[paragraphs 0106 and 0107 of Moshir].

19.   As to claim 3, Donohue as modified teaches the service broker is a software

component in the electronic device [col. 15, lines 29 – 42 of Donohue].

20.   As to claim 4, Donohue as modified teaches the one of the plurality of servers

comprises a download server capable of receiving a request for an update package, the

download server capable of sending the requested update package to the one of the

plurality of software components in the electronic device [paragraphs 0061 – 0062 of

Moshir].

21.   As to claim 5, Donohue as modified teaches the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component [paragraph 0053 of Moshir].

22.   As to claim 6, Donohue as modified teaches the service broker forwards the update package to at least one of the plurality of software components in the electronic device [paragraph 0061 of Moshir].

23.   As to claim 7, Donohue as modified teaches the one of the plurality of software applications in the electronic device comprises an update agent capable of processing an update package, the update agent capable of being invoked by the service broker when an update package is communicated to the electronic device [col. 10, lines 16 – 38 of Donohue].

24.   As to claim 8, Donohue as modified teaches the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component [paragraph 0053 of Moshir].

25.   As to claim 9, Donohue as modified teaches the at least one request for service comprises an asynchronous request [paragraph 0083 of Moshir]; and the service broker is capable of communicating a response received from the one of the plurality of servers

back to the one of the plurality of software components [paragraphs 0106 and 0107 of

Moshir].

26.   As to claim 10, Donohue as modified teaches the at least one request for service

comprises an asynchronous request [paragraph 0083 of Moshir]; the one of the plurality

of software components registers callback information with the service broker [col. 16,

lines 46 – 60 of Donohue]; and the service broker communicates a response received

from the one of the plurality of servers back to the one of the plurality of software

applications based upon the registered callback information [paragraph 0083 of Moshir].

27.   As to claim 11, Donohue as modified teaches the service broker is a server

communicatively coupled to the electronic device [paragraph 0106 of Moshir].

28.   As to claim 12, Donohue as modified teaches the service broker server

determines which one of the plurality of servers is available and capable of processing

the at least one service request, and subsequently forwards the request to the

determined one of the plurality of servers [col. 16, lines 46 – 60 of Donohue and

paragraphs 0060 and 0061 of Moshir].

29.   As to claim 13, Donohue as modified teaches the determined one of the plurality

of servers is forwarded the at least one service request for processing, and a response

from the determined one of the plurality of servers is forwarded to the one of the

plurality of software components [paragraphs 0060 and 0061 of Moshir].

30.   As to claim 14, Donohue as modified teaches processes the at least one service

request, the at least one service request comprising a request for a software update

from the one of the plurality of software components,   retrieves an update package and

associated information [col. 10, lines 39 – 59 of Donohue], and communicates the

update package and associated information to the electronic device [paragraphs 0060

and 0061 of Moshir].

31.   As to claim 15, Donohue as modified teaches the plurality of software

components comprises a download agent and an update agent [col. 10, lines 16 – 38 of

Donohue]; the download agent is capable of requesting a software update from the

service broker server, and receiving in response an update package from the service

broker server [paragraph 0105 of Moshir]; and the update agent is capable of

processing the received update package for updating at least one of firmware and

software in the electronic device [col. 10, lines 39 – 59 of Donohue].

32.   As to claim 17, Donohue as modified teaches a generic intelligent responsive

agent in the electronic device, the generic intelligent responsive agent communicatively

coupled to the service broker [paragraph 0055 of Moshir]; the generic intelligent

responsive agent capable of establishing a communication link with the service broker

server [paragraph 0056 of Moshir]; the generic intelligent responsive agent capable of

forwarding the software update request and associated information from the client-side

component to the service broker server [paragraphs 0060 and 0061 of Moshir]; and the

service broker server determining the one of the plurality of service providers as a target

server capable of processing the software update request and forwarding the software

update request to the target server [col. 16, lines 46 – 60 of Donohue and paragraphs

0060 and 0061 of Moshir].

33.   As to claim 18, Donohue as modified teaches the target server: processes the

received software update request [paragraphs 0060 – 0061 of Moshir]; retrieves an

appropriate update package and associated information [col. 10, lines 39 – 59 of

Donohue]; and communicates the appropriate update package and associated

information back to the generic intelligent responsive agent for subsequent

communication to the associated client-side component [paragraph 0061 of Moshir].

34.   As to claim 19, Donohue as modified teaches the generic intelligent responsive

agent: acts as a proxy for the client-side component [paragraph 0266 of Moshir and col.

9, lines 32 – 36 of Donohue]; and provides one of asynchronous communication

[paragraph 0083 of Moshir] and synchronous communication facilities for interactions

with the target server [col. 16, lines 42 – 46 of Donohue].

35.   As to claim 23, Donohue as modified teaches under the control of the electronic

device, communicating the received results to an update agent capable of updating the

at least one of the software component and software component configuration

[paragraph 0061 of Moshir].

36.   As to claim 24, Donohue as modified teaches under the control of the electronic

device, communicating a request by the software component to a generic intelligent

responsive agent, the request comprising a command to be invoked on the remote

service provider and parameters to be passed to it [col. 10, lines 16 – 39 of Donohue];

communicating the request to the service broker [col. 10, lines 17 – 22 of Donohue];

and communicating the received results to the software component [paragraphs 0086

and 0087 of Moshir], under the control of the service broker, receiving the command

request [paragraph 0099 of Moshir]; determining a service provider based upon the

update request [col. 16, lines 46 – 60 of Donohue]; invoking update functionality on the

determined service provider [col. 16, lines 6 – 27 of Donohue]; and transmitting results

of the invoked update functionality to the generic intelligent responsive agent

[paragraphs 0106 and 0107 of Moshir].

Conclusion

37.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

38.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768.

The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/   Li B. Zhen
Primary Examiner, Art Unit 2194   Primary Examiner
                                                      Art Unit 2194